

A NEW BOTANICAL TEXTBOOK FOR HIGH SCHOOLS.— Botany now occupies at least in the secondary schools of New England and New York, a rather precarious place in the course of study. Reaction against the formal morphology and systematic botany of the older texts, and the excessive experimentation required by more recent authors, has in many schools crowded botany as such out of the course, and it occupies with zoölogy and physiology, a scant third of the freshman or sophomore year of "biology." A book like Allen and Gilbert's new text<sup>1</sup> ought to revive interest in the science as a matter of practical everyday education for everyone, especially in rural, village and suburban schools.

Simple and for the most part familiar types are studied for thirteen chapters, outlining the great divisions of plant life. The cucumber with its monoecious flowers comes first, thus giving the idea of sex and fertilization clearly at the start. These chapters are not so elaborate nor so scientific as those which correspond in Atkinson's Botany for High Schools, but they are much better adapted for young students.

Five chapters are given to the morphology and uses of roots, stems, leaves, flowers and fruits. The remaining six chapters deal largely with economic botany, including forestry, plant breeding and plant-diseases. Laboratory and field work is carefully planned for each chapter, but it is printed at the end of the book where it does not interfere with the obvious readability of the text.

Instead of giving a mutilated key to the flora, with a small number of species listed and no ranges given, the authors urge the students to use the accepted manuals for various parts of the country.

Much is said incidentally in regard to plant relations to environment, but the book would be considerably stronger if these facts were summed up in a good chapter on ecology, even at the expense of condensation in the economic chapters.

The authors have with clearness and ease given the latest scientific conclusions about plant life and growth. They have been successful in keeping down the number of technical terms to a minimum. The book is worthy of the attention of the general reader, as well as of the High School student and teacher.—CLARENCE H. KNOWLTON.

<sup>1</sup> TEXTBOOK OF BOTANY. By Charles E. Allen and Edward M. Gilbert. pp. 450 + x, illustrated. Cloth, \$1.48. D. C. Heath & Co., Boston.

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